DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING SERVICES
Office of Structural Materials
Quality Assurance and Source Inspection

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Contract #: 04-0120F4
Cty: SF/ALA Rte: 80 PM: 13.2/13.9
File #: 82.28

WELDING INSPECTION REPORT

Resident Engineer: Siegenthaler, Peter
Address: 333 Burma Road
City: Oakland, CA 94607

Report No: WIR-017687
Date Inspected: 27-Oct-2010

Project Name: SAS Superstructure
Prime Contractor: American Bridge/Fluor Enterprises, a JV
Contractor: Westmont Industries

OSM Arrival Time: 700
OSM Departure Time: 1530
Location: Santa Fe Springs, CA.

CWI Name:	R. Rodriguez, R. Dominguez	**CWI Present:**	☑ Yes ☐ No
Inspected CWI report:	☐ Yes ☑ No ☐ N/A	**Rod Oven in Use:**	☐ Yes ☐ No ☑ N/A
Electrode to specification:	☑ Yes ☐ No ☐ N/A	**Weld Procedures Followed:**	☑ Yes ☐ No ☐ N/A
Qualified Welders:	☑ Yes ☐ No ☐ N/A	**Verified Joint Fit-up:**	☑ Yes ☐ No ☐ N/A
Approved Drawings:	☑ Yes ☐ No ☐ N/A	**Approved WPS:**	☑ Yes ☐ No ☐ N/A
		Delayed / Cancelled:	☐ Yes ☑ No ☐ N/A

Bridge No: 34-0006
Component: Travelers

Summary of Items Observed:

The Quality Assurance Inspector Sean Vance arrived on site at Westmont Industries (WMI) in Santa Fe Springs, CA, to randomly observe the in process welding of the Travelers. The QA Inspector arrived on site to randomly observe the WMI Quality Control (QC) Inspectors in process and completed visual and nondestructive testing. Upon the arrival of the QA Inspector the following observations were made:

Trolley Test Stand

On this date, the QA Inspector observed WMI production welder, Mr. Juan Jimenez (WID # 3059), continuing to perform Gas Metal Arc Welding (GMAW) activities for the assembly identified as Rail Y Assembly 2-A4, web to flange.

The QA Inspector observed Mr. Jimenez performing the GMAW in the Horizontal (2F) position on the previously fit Web to Bottom Flange plate material and the fit up T-joint appeared to be designated as an 8 mm fillet weld. At this time, the QA Inspector observed that the above mentioned GMAW on the above mentioned assembly appeared to be near completion and the QA Inspector observed that Mr. Jimenez occasionally perform grinding activities on the weld start/stops and terminations to smooth and blend the areas.

Traveler Test Rack

On this date, the QA Inspector observed that the earth excavations for the Traveler Test Rack footings, appeared to still be in process. On this date, the QA Inspector observed WMI production personnel Mr. Jerry Smith, continuing to utilize the flame cutting table, to cut plate material. The QA Inspector then spoke with Mr. Smith and he explained that the material currently being cut, will be utilized for the fabrication of the Traveler Test Rack. The QA Inspector observed that the cutting operations were being performed, utilizing two oxygen acetylene

cutting torches and that the plate material was stationary on the cutting table. The QA Inspector observed that the two torches were mobile and cutting specific dimensional shapes in the material, which Mr. Smith had previously programmed into the computer software. Once the material was cut, the QA Inspector observed Mr. Smith utilize a paint stick marker to identify the material with the Job #, Dwg. # and piece mark, per the applicable drawing Bill of Material list. The QA Inspector observed that the plate material had been previously inspected with the MTR's provided and the QA Inspector had previously written "OK to Cut" on the material.

SAS-EB Traveler
Fixed Stairs Section
On this date, the QA Inspector observed Westmont Industries (WMI), production welder, Mr. Jose Rodriguez (WID # 3031), continuing to perform Flux Core Arc Welding (FCAW) activities on the previously fit Frame assemblies, identified as 10-A237, 11-B237, 3-A217, 4-A218, 5-A223 and 6-A224. The QA Inspector observed throughout the shift, that the FCAW was being performed in various positions, on the connector plate and Tube Steel (TS) material. The QA Inspector observed that a WMI production helper appeared to be continuing the grinding activities on the completed fillet and flare groove welds. The QA Inspector observed that the continual grinding was being performed on areas of the welds, which appeared to be excessive reinforcement and removal of weld spatter.

See attached picture below.

Lower Truss Section
On this date, the QA Inspector observed Westmont Industries (WMI), production welder Eutimo Lopez (WID # 3035), continuing to perform Flux Core Arc Welding (FCAW) activities for the SAS-EB Traveler frames. The QA Inspector observed Mr. Lopez performing the FCAW on previously fit and tack welded Tube Steel (TS) and plate material, for the Frame Assembly identified as B240, per the shop drawings. The QA Inspector observed Mr. Lopez perform the FCAW in various positions and observed that Mr. Lopez appeared to be performing the FCAW on the fillet and flare groove welds. Later in the shift, the QA Inspector observed that the FCAW on the above mentioned Frame Assembly, appeared to near completion. After completion, the QA Inspector then observed WMI Production personnel utilize the overhead bay crane to lift this assembly and place on the previously staged Wide Flange Beam (WFB), for the fabrication of the SAS-EB Lower Truss Section.

On this date, the QA Inspector observed Smith Emery QC Inspector Ruben Dominguez performing Ultrasonic Testing (UT), on the previously completed Complete Joint Penetration (CJP) splices on the above mentioned Frame Assembly. The QA Inspector observed Mr. Dominguez performing the testing on 4 each of the CJP Tube steel (TS) joint splices that the weld joints numbers appeared to be designated as S1, S2, S3 and S4. The QA Inspector observed that the material appeared to be 5mm thick. The QA Inspector observed QC Inspector Dominguez initially perform a lamination scan, utilizing a 0 degree transducer (straight beam) on the completed weld joints, to verify that laminar reflectors were not present in the weld joint testing area. The QA Inspector observed that Mr. Dominguez was utilizing a 12 mm diameter, 2.25 MHz frequency transducer, to perform the lamination scan. After observing QC Inspector Dominguez performing the lamination scan, he QA Inspector then observed Mr. Dominguez utilizing a 70 degree Lucite wedge, attached to a 12mm, 2.25MHz transducer, to perform Shear Wave testing, on the above mentioned weld joints. The QA Inspector observed that Mr. Dominguez was utilizing a Krautkramer USN 52L testing instrument and during the testing, the scanning pattern appeared to be in compliance with AWS Fig. 6.24. After testing was complete, Mr. Dominguez explained that no rejectable

indications were found and the inspection had been performed in accordance to AWS D1.1 2002, Annex K, testing criteria. Mr. Dominguez then explained that an applicable testing report will be completed, per the contract requirements.

See attached picture below.

The QA Inspector observed that Smith-Emery QC Inspector Ruben Dominguez was present, during the above mentioned welding and tacking activities and QC Inspector Dominguez explained that approved Welding Procedure Specifications (WPS's) were being utilized. The QA Inspector randomly observed that the applicable WPS's and copies of the shop drawings, were located near each work station, where the above mentioned FCAW and fitting activities were being performed. The QA Inspector randomly verified that the consumable material, utilized during the welding was in compliance to the applicable WPS and that the above mentioned welders were currently qualified for the applicable process and position of welding. The QA Inspector randomly observed QC Inspector Dominguez verifying the in-process welding parameters, including voltage, amperage, pre-heat and travel speed and the parameters appeared to be in compliance to the applicable WPS.

Summary of Conversations:

As noted above.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Nina Choy (510) 385-5910, who represents the Office of Structural Materials for your project.

Inspected By:	Vance,Sean	Quality Assurance Inspector
Reviewed By:	Edmondson,Fred	QA Reviewer